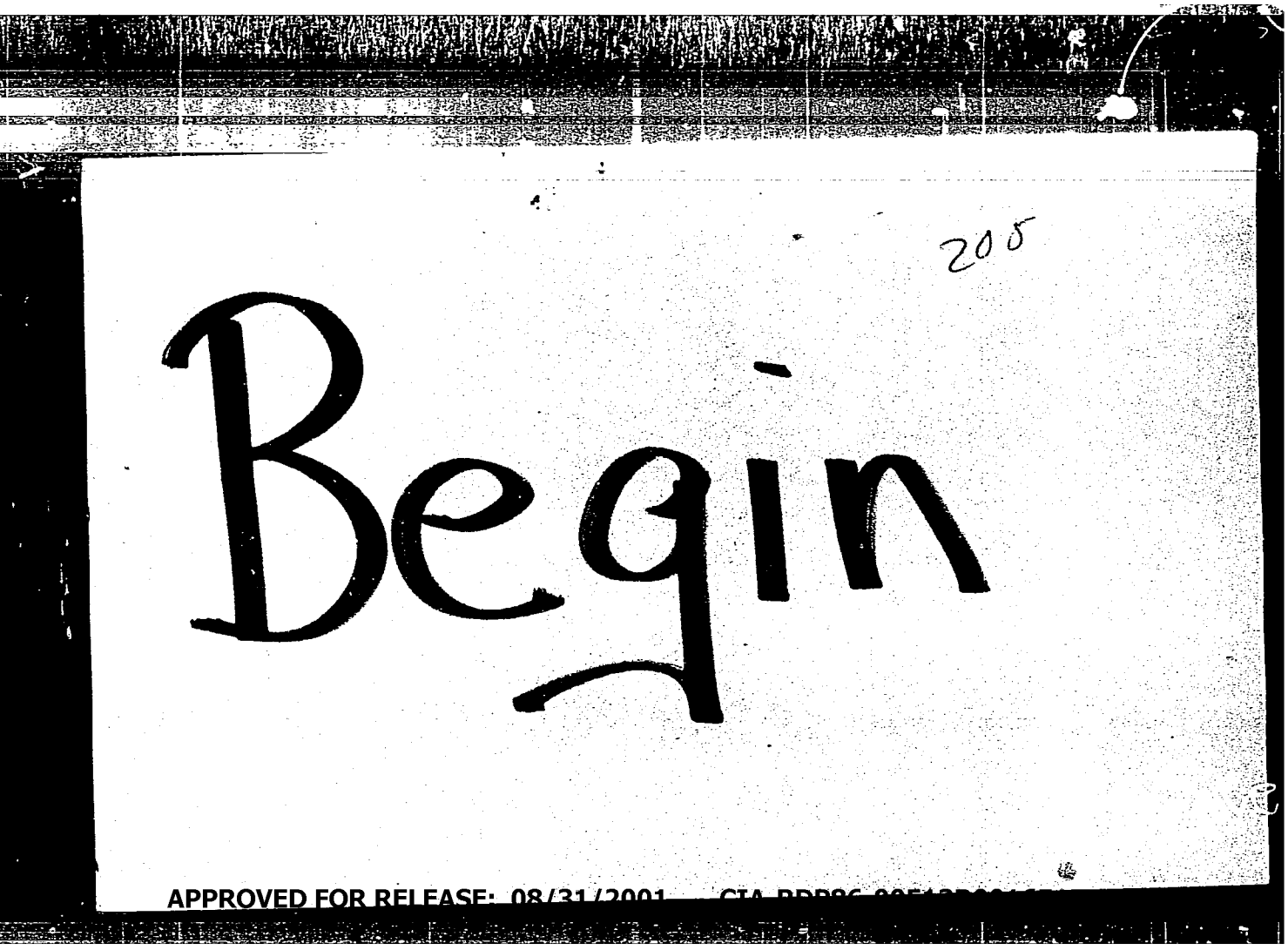

YELISEYEV, E.N.; SMIRNOVA, S.I.

Solubility of the pentlandite. Mat.po min.Kol'.poluost. 1:176-179 '59. (MIRA 15:2)

(Pentlandite)

SMIRNOVA, S. I.

AID P - 2350

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 14/30

Authors : Shugal, Ya. L., and Smirnova, S. I. Engs., Moscow

Title : Film-coated cardboard, a new electrical insulating material

Periodical : Elektrichestvo, 5, 59-61, My 1955

Abstract : The authors describe the components and the method of production of resin-coated pressboards used for the insulation of windings of electric motors with class A insulation. The appartus for gluing together the triacetate film and the pressboard was designed by Ya. G. Shugal and I. I. Lebedev. Two diagrams, 1 drawing.

Institution: None

Submitted : Je 24, 1954

SMIRNOVA, S. I.

Cand Med Sci - (diss) "Variants of voluntary respiratory pauses and their clinical significance." Ivanovo, 1961. 18 pp; (Ivanovo State Medical Inst); 2000 copies; price not given; (KL, 5-61 sup, 206)

YELISEYEV, N.N.; SMIRNOVA, S.I.

Retgersite containing iron and magnesium. Zap. Vses. min. ob-va 87 no.1:3-13 '58. (MIRA 11:6)

1. Laboratoriya fizicheskikh metodov issledovaniya mineralov i rud Kol'skogo filiala AN SSSR.
(Retgersite)

SMIRNOVA, S.I.

Hot dry winds and forest shelterbelts in the Northern Caucasus.
Trudy TSIP no.101:108-112 '62. (MIRA 15:9)
(Caucasus, Northern--Crops and climate)
(Windbreaks, shelterbelts, etc.)

SMIRNOV, [illegible]

[illegible]tion of permanent planes for determining moisture reserves characterizing the soil moisture of a farming area. Trudy TSIP [illegible].145:30-41 '65. (MIRA 18:10)

AUTHOR: Smirnova, S. I. SOV/50-58-6-8/24

TITLE: On the Method of Estimating the Dry Winds Within a Smaller Area (K metodike otsenki sukhoveyev na nebol'shoy territorii)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 6, pp. 32-32 (USSR)

ABSTRACT: The plants of any geographical district are to a certain extent a product of the local climate. They adjust themselves to the conditions of climate and man receives good harvests of the sorts of plants recommended for that district. An abrupt change of the course of weather by unfavorable weather phenomena causes a decrease of the harvest. The dry wind in the steppe areas is often such a cause. There was, however, no uniform method of estimating it for smaller areas. The author suggests the following method: The observations concerning the saturation deficit at 1 o' clock p. m. during every interphase period of any plant make it possible to determine the intensity of the dry winds as compared to the usual intensity of the district in question. This is, however, taking much time. Instead of this some critical limiting values for the saturation deficit during the single phases

Card 1/2

On the Method of Estimating the Dry Winds Within a Smaller Area SOV/50-58-6-6/24

of development of the dominating sorts of plants could be fixed which could then serve as standards for the registration of a possible damage to the plants. Besides the humidity deposits in the soil and the wind velocities are to be determined. By means of an example the author shows (Rostov-na-Donu area) that days with a saturation deficit, which was taken to be higher than the absolute values, are such days when the average value of the saturation deficit exceeds the standards by the 1,3-, 1,5- and 2 fold. This method still had to be checked at two or three other stations.

1. Meteorology---USSR 2. Weather forecasting 3. Climatic factors --Determination 4. Agriculture--Meteorological factors

Card 2/2

SMIRNOVA, S.I.

Characteristics of the area of Rostov Province based on the dry winds prevailing there. Trudy TSIP no.72:55-60 '58.
(MIRA 12:1)
(Rostov Province--Droughts) (Meteorology, Agricultural)

BUSSEN, I.V.; SMIRNOVA, S.I.

Sinter formations from crosscuts of Karnasurt Mountain in the Lovozero Tundras. Mat.po min.Kol'.poluost. 1:116-120 '59. (MIRA 15:2)

(Lovozero Tundras--Sediments (Geology))

3 (7) SOV/50-59-9-6/16

AUTHOR: Smirnova, S. I.

TITLE: On Observations of Precipitation in Agricultural Fields

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 9, pp 31 - 32 (USSR)

ABSTRACT: The author investigated the possibility of improving the method of observing the ground humidity in the steppes of Sal'sk exposed to drought. On this occasion, the author studied the type of rain distribution during the summer in this area. Besides, the precipitation recorder at the meteorological observation post, 10 pluviometers of Davitaya were set up on the fields of the grain sovkhoz "Gigant" south of this observation post along a radius of up to 8 km. On some summer days, the amount of precipitation on individual fields was very different, this difference amounting up to 47 mm from June 5 to July 4, 1958. The moistening of single parts of the same field with precipitation was also irregular. This influenced the ripening as well as the time and quantity of crops. Similar reports on a varying distribution of precipitation on the area of one farm were also obtained by the

Card 1/2

On Fields Observations of Precipitation in Agricultural SOV/50-[illegible]

expedition of the Tsentral'nyy institut prognoz[illegible] Institute of Forecasts) in the Orenburg oblast', [illegible] shows these results of precipitation measurements [illegible] 1 figure, 2 tables, and 2 Soviet references.

Card 2/2

SMIRNOVA, S.I.

Forest shelterbelts and farm crop yields in Sal'sk District, Rostov Province. Trudy TSIP no.88:127-129 '59. (MIRA 12:8)
(Sal'sk District--Field crops) (Windbreaks, shelterbelts, etc.)

SMIRNOVA, S.I.; DOLGOV, S.I.

Representativeness of observations on soil moisture in the Cis-caucasian steppe province. Trudy TSIP no.107:3-22 '61.
(MIRA 14:5)

(Rostov Province--Soil moisture)

SMIRNOVA, S.I.

Standard criterium for droughts. Meteor. i gidrol. no.5:31-35 My '63.
(MIRA 16:5)

1. TSentral'nyy institut prognozov.
(Droughts)

SMIRNOVA, S.I.

Meteorological effect of the irrigation on adjacent nonirrigated areas. Meteor. i gidrol. no.11:40-42 N '63. (MIRA 16:11)

1. TSentral'nyy institut prognozov.

BELOGUROV, Yu.A.; BELYAYEV, A.F.; VISHNEVSKIY, P.; ZAKHAROV, V.N.; KAGANER, M.; MARGOLIN, L.M.; PASHKOV, Yu.S.; POLYAKOVA, Ye.A. SMIRNOVA, S.I.

In the Main Administration of the Hydrometeorological Service. Meteor. i gidrol. no.6:62 Je '64 (MIRA 17:8)

In the institutions of the Hydrometeorological Service. Ibid.: 63.

Meetings, conferences, seminars. Ibid.:63-64

Abroad. Ibid.:64.

ACC NR: AP6034256 (N) SOURCE CODE: UR/0390/66/029/005/0521/0522

AUTHOR: Arbuzov, S. Ya.; Aleksandrova, A. Ye.; Smirnova, S. M.
(Department head; Professor)

ORG: Department of Pharmacology and Pharmacy, Military Medical Order of Lenin Academy im. S. M. Kirov, Leningrad (Kafedra farmakologii i farmatsii Voyenno-meditsinskoy ordena Lenina akademii)

TITLE: The effect of pyridoxiphen on the central nervous system

SOURCE: Farmakologiya i toksikologiya, v. 29, no. 5, 1966, 521-522

TOPIC TAGS: central nervous system, hematoencephalitic barrier, drug effect, animal experiment, ADRENOLYTIC DRUG

ABSTRACT: The effect of a new adrenolytic agent, pyridoxiphen (a condensation product of phenamine and pyridoxine), on the central nervous system was studied. Experiments showed that pyridoxiphen did not disrupt conditioned reflexes in rats or change spontaneous bioelectricity in rabbit brains. In addition, pyridoxiphen did not decrease the group toxicity of phenamine in mice. It was concluded that, like most adrenolytic agents, pyridoxiphen does not have a central adrenolytic effect. Apparently this substance is also incapable of overcoming the blood-brain barrier. [JS]

SUB CODE: 06/ SUBM DATE: 06Apr65/ ORIG REF: 004/ OTH REF: 002 [WA-50; CBE No. 14]

Card 1/1 UDC:615.717-092:612.82

SMIRNOVA, S. M.

30(4) PHASE I BOOK EXPLOITATION SOV/2799

Moscow. Publichnaya biblioteka. Nauchno-metodicheskiy kabinet vedeniya

Nauchno-tekhnicheskiye znaniya-v massy; sbornik materialov v pomoshch' massovym bibliotekam (Scientific and Technical Knowledge for Everyone, Collection of Materials for the Aid of Public Libraries) Moscow, 1958. 196 p. Errata slip inserted. 15,000 copies printed.

Compilers: G. S. Multanovskaya and V. V. Neyman; Ed.: D. Yagodina, Candidate of Pedagogical Sciences; Tech. Ed.: L. M. Khelemskaya.

PURPOSE: This book is intended for librarians.

COVERAGE: This collection of articles reviews popular scientific and technical literature to aid public library workers in disseminating science information to the reading public. The role and significance of principal industries

Card 1/4

in the technological development of the USSR are covered. The last two articles describe the experience of individual libraries in promoting popular-science books. The appendix gives a list of bibliographic aids for popular-science literature. No personalities are mentioned.

TABLE OF CONTENTS:

BORISOVA, Ye.A.; SHASHENKOVA, I.I.; Prinimala uchastiye: SMIRNOVA, S.M., tekhnik

Method of determining the tendency of sheet titanium alloys to crack formation during prolonged storage under load. Zav.lab. 30 no.12:1504-1505 '64. (MIRA 18:1)

MUGINOVA, Ye.L.; SMIRNOVA, S.M.

Experience in the organization of minute exercise in schools associated with the Raukhfus Pediatric Hospital. Pediatriia 39 no.1:4-6 '61. (MIRA 14:1)
(LENINGRAD—EXERCISE THERAPY)

ARBUZOV, S.Ya.; SMIRNOVA, S.M.

Sympatholytic and hypotensive effects of pyridoxiphen. Farm. i toks. 27 no.4:420-423 Jl-Ag '64.

(MIRA 17:11)

1. Kafedra farmakologii i farmatsii (zav. - prof. S. Ya. Arbuzov) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova, Leningrad.

BADYSHTOVA, K.M.; CHESNOKOV A.A.; IVANKINA, E.B.; ZHADANOVSKIY, N.B.; KONYUKHOVA, M.V. Prinimali uchastiye: KONOVALOV, B.S., inzh.; NAUMOVA, A.P., inzh.; PYATILETOVA, N.I., inzh.; SMIRNOVA, S.M., inzh.; CHIBRIKOVA, L.I., laborant; BUGROVSKAYA M.S., laborant.

Effect of the nature of raw stock on the stability of transformer oil. Nefteper. i neftekhim. no.11:15-17 '64 (MIRA 18:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti , Kuybyshev i Novokuybyshevskiy zavod.

ZIL'BERG, G.A.; SMIRNOVA, S.N.

Oxidation of branched paraffin hydrocarbons in the liquid phase. Dokl. AN SSSR 166 no.3:643-646 Ja '66. (MIRA 19:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Submitted June 25, 1965.

L 16945-66 EWT(m)/EWP(j) JW/RM

ACC NR: AP6004391 SOURCE CODE: UR/0020/66/166/003/0643/0646

AUTHOR: Zil'berg, G.A.; Smirnova, S.N.

ORG: Moscow Institute of Fine Chemical Engineering im. M.V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Liquid phase oxidation of branched paraffin hydrocarbons

SOURCE: AN SSSR. Doklady, v. 166, no. 3, 1966, 643-646

TOPIC TAGS: hydrocarbon, oxidation kinetics, cobalt compound

ABSTRACT: In order to determine the effect of the structure of hydrocarbons on their oxidation rate, i-paraffins with different numbers of substituents in different positions were synthesized, (2-methyl-, 4-methyl-, 2,3-dimethyl-, 2,4-dimethyldodecane; n-dodecane, n-tridecane, n-tetradecane, n-pentadecane), and their oxidation was carried out in the presence of cobalt stearate catalyst at 113C by bubbling air through the reaction vessel. The rate of accumulation of the oxidation products was determined. Oxidation of branched hydrocarbons formed stable products at a much faster rate than oxidation of linear hydrocarbons with the same number of carbon atoms. Whereas in the case of

Card 1/2 USD: 547.217.1/9

L 16945-66

ACC NR: AP6004391

linear hydrocarbons the oxidation rate is proportional to the number of methylene groups, in the case of branched hydrocarbons the rate depends on the number, character, and position of the substituents. Data showed that in the oxidation of i-paraffins with one or two tertiary carbon atoms, the relative content of volatile oxygen-containing compounds differs only slightly from the content of these compounds in the oxidation products of linear paraffins. It is postulated that the formation of secondary hydroperoxides is accelerated in the oxidation of branched hydrocarbons. The results lead to the conclusion that the catalyst possesses a regulatory function. The paper was presented by Academician S. S. Medvedev 25 June 1965. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07 / SUBM DATE: 15Jun65 / ORIG REF: 008 / OTH REF: 004

Card 2/2 vmb

ZIL'BERG, G.A., kand.tekhn.nauk; SMIRNOVA, S.N.

Effect of ultrasonic waves on the crystallization of naphtalene.
Koks i khim. no.12:39-43 '62. (MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
M.V.Lomonosova.

(Naphtalene)
(Ultrasonic waves--Industrial applications)
(Crystallization)

12(1)
AUTHORS: Motavkin, P. A., Smirnova, S. N.

SOV/20-124-6-39/55

TITLE: On Certain Histophysiological Peculiarities of the Vegetative Neurons of the Brain Stem (O nekotorykh gistofiziologicheskikh osobennostyakh vegetativnykh neyronov mozgovogo stvola)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 6, pp 1324-1327 (USSR)

ABSTRACT: Several data have been available which deal with important histophysiological peculiarities of the nerve cells in the vegetative nuclei situated in the cerebrum stem. The vegetative neurons possess a selective sensibility towards the colloids (trypan blue in vivo, Ref 1, 2). At the same time the nerve cells of the somatic nuclei of the brain stem remained free from the injected coloring matter. The protoplasm of the grey prominence (Tuber cinereum) of the supraoptic nucleus, of the base of the 3rd ventriculus, of the black substance (Substantia nigra) and the lightblue spot (Locus coeruleus), of the Yakubovich nucleus, and of the dorsal nucleus of the nervus vagus contained noticeable quantities of granulae of trypan blue. By modern methods devised for determination of

Card 1/4

polysaccharides (Refs 3, 4) it was found that the nuclei enumerated are able to synthesize glycogen and store up visible quantities of it in their protoplasm (Ref 4). The melanin content increasing in the vegetative neurons with proceeding age is to be considered characteristic feature (known to be happening with man (Ref 5) and recently found with dogs (Ref 6)). The neurosecretory activity of the above-mentioned cells is indicated by granulae, drops and vacuoles in the cell-body. The authors investigated: medulla oblongata, mesencephalon, diencephalon, further the motor region of the cerebral cortex and several cerebral sections of the cerebellar hemispheres. For this reason 8 rabbits, 10 cats and 6 dogs were used for experiments. After several failures the authors modified the preparation, fixation and coloring method. The nuclei of the brain stem were investigated on frontal incision series from the lower outline of the medulla oblongata to the level of the anterior edge of the chiasma opticum. The following results were obtained: the bodies of a predominant majority of the dorsal nucleus of the n. vagus extending to the lightblue spot (Locus coeruleus) are filled with darkblue, sometimes rather large granulae. In a smaller part of the

neurons small pale-lightblue granulae are to be found mainly near the cell nucleus or not at all. According to further descriptions of the photographs investigated the authors determined that vegetative neurons differ from nerve cells of the somatic nuclei of the stem with respect to quantity and shape of the reducing substances discovered in their protoplasm. They differ in the same way from similar cells of the cerebral and cerebellar cortex. Further vegetative nuclei contain granulae in the astrocytes and oligodendrocytes in contrast to the somatic nuclei. This was not only the case in the hypothalamic region, but also in the dorsal nucleus of the n. vagus in the locus coeruleus, in the Yakubovich nucleus as well as in the black substance. According to the authors' opinion, said property together with the neurosecretory capability, with the synthetic capability of glycogen, the melanin storage, the fuchsinophil granulae and colloid accumulations represents the essential histophysiological

On Certain Histophysiological Peculiarities of the Vegetative Neurons of the Brain Stem SOV/20-124-6-39/55

properties of the above elements. In conclusion the chemical nature of the substances found in neurons is discussed. There are 1 figure and 19 references, 9 of which are Soviet.

ASSOCIATION: Vladivostokskiy meditsinskiy institut (Vladivostok Medical Institute)

PRESENTED: October 22, 1958, by N. N. Anichkov, Academician

SUBMITTED: May 30, 1958

Card 4/4

SMIRNOVA, S.N.

USSR / General Biology. General Histology B-3

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 259

Author : Motavkin, P.A., Smirnova, S.N.

Inst : Not Given

Title : Cytochemistry of Reduced Glutathione in Elements of the Nervous System

Orig Pub : Dokl. AN SSSR, 1956, 111, No 2, 452-455

Abstract : The cytochemistry of reduced glutathione (I) was studied in the sciatic nerve, spinal ganglia, various sections of the spinal cord and cerebrum, and also in the valf muscles and the mesentery of the small intestine in 8 rabbits. The SH-groups were determined by the Shevremon and Frederick method. Substantial differences were observed between the sensory and motor neurons: the protoplasm of the sensory neurons gave a diffuse blue coloration, while in the motor neurons of the anterior horns of the spinal cord I was detected in the form of coarse clumps, similar to tigroid granules. The glial elements of the central

Card : 1/2

Abs Jour : Ref Zhur - Biol., No 1, 1957, No 259

nervous system free of SH-groups are found in the form of small granules located in the nucleus. In the path of the capillary muscle tissues and the mesentery there are not detected granular cells, which indicates no substantial peculiarities in the metabolism of thiol compounds in the nerve tissue.

SMIRNOVA, S.N.

USSR/ Medicine - Histology

Card 1/1 Pub. 22 - 42/51

Authors : Smirnova, S. N.

Title : Embryogenesis of nerve cells of fascicular gasserian ganglions and cervical spinal cord plexuses in human anatomy

Periodical : Dok. AN SSSR 101/2, 355-358, Mar 11, 1955

Abstract : The development of nerve cells of cervical spinal cord, gasserian and fascicular ganglia was investigated in 50 embryos and fetuses of all ages beginning with 6 weeks of intra-uterine life and newly born. The results obtained are described. Fourteen references: 8 Russian and USSR, 4 German, 1 French and 1 English (1886-1950). Illustrations.

Institution : State Medical Institute, Yaroslav

Presented by : Academician L. A. Orbeli, December 13, 1954

L 45889-66 EWT(m)/EWP(j) RM

ACC NR: AP6023959 SOURCE CODE: UR/0204/66/006/002/0219/0226

AUTHOR: Zil'berg, G. A.; Smirnova, S. N. 29 B

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Characteristics of the liquid-phase oxidation of certain paraffinic hydrocarbons of normal and branched structure

SOURCE: Neftekhimiya, v. 6, no. 2, 1966, 219-226

TOPIC TAGS: hydrocarbon, oxidation kinetics

ABSTRACT: The branched paraffinic hydrocarbons 2-methyldodecane, 4-methyldodecane, 2,3-dimethyldodecane, 2,4-dimethyldodecane, 2,2,3-trimethyldodecane, 2-methyl-3-isopropyldodecane, and 5-butyldodecane, and the corresponding normal paraffinic hydrocarbons n-dodecane, ni-tridecane, ni-tetradecane and n-pentadecane were subjected to catalytic oxidation with atmospheric oxygen at 113±2°C in the presence of cobalt stearate catalyst (0.3 mole%). The content of acids, carbonyl compounds, alcohols, and esters at various stages of the oxidation (excluding volatile products) was determined. For normal hydrocarbons, the oxidation rate was found to be proportional to the number of methylene groups; this indicates the equivalence of all the methylene groups during catalytic oxidation. The catalytic oxidation of branched hydrocarbons was faster and produced a greater number of low-molecular acids than the oxidation of their straight-

Card 1/2 UDC: 547.21+547.21-125]:542.993.7

L 45888-66

ACC NR: AP6023959 O

chain analogs. This higher oxidation rate is probably due to the fact that the formation of hydroperoxides is facilitated by the lower strength of the C-H bonds in the branched hydrocarbons. The rate of accumulation of free radicals resulting from the decomposition of the hydroperoxides dropped off with time because of the inhibiting effect of the catalyst. The direction of the oxidation is preserved independently of its rate, i. e., of the extent of the process. Orig. art. has: 5 figures and 5 tables.

SUB CODE: 07/ SUBM DATE: 19Jul65/ ORIG REF: 014/ OTH REF: 004

Card 2/2 fc

SMIRNOVA, S.V.; TSEYTTS, V.V.; SHIKHOBALOV, S.P.

Using the optical polarization method in investigating the stressed state of blades of a bucket-wheel hydraulic turbine. Issl.po uprug.i plast. no.1:139-146 '61. (MIRA 15:2)
(Blades--Testing)

SLAVIN, G.A., kand.tekhn.nauk; PETROV, A.V., kand.tekhn.nauk; SMIRNOVA, S.V., inzh.; KOROTKOVA, G.M., inzh.

Automatic welding with a nonconsumable electrode of thin-sheet aluminum alloys using a pulsating arc. Svar.proizv. no.12:18-20 D '65. (MIRA 18:12)

DOBRUNOV, G.M.; SMIRNOVA, T.A.; BLINOV. A.N.; RUDKIN, A.G., konstruktor; MIKHEYEV, V.P., konstruktor; MAL'TSEV, B.G., konstruktor; PETROV, V.I., konstruktor; BASINKEVICH, I.R., red.izd-va; SHIBLOVA, R.Ye., tekhn. red.

[Album of standard shielding and protecting devices for basic types of sawmilling and woodworking equipment] Al'bom tipovykh ograditel'nykh ustroistv i predokhranitel'nykh prisposoblenii dlia osnovnykh vidov lesopil'no-derevoobrabatyvaiushchego oborudovaniia. Moskva, Goslesbumizdat, 1963. 51 p. (MIRA 16:9)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.
(Woodworking machinery--Safety measures)

L 11211-66 EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) LJP(c) JD/HW

ACC NR: AP6000617 SOURCE CODE: UR/0135/65/000/012/0018/0020

AUTHOR: Slavin, G. A. (Candidate of technical sciences); Petrov, A. V. (Candidate of technical sciences); Smirnova, S. V. (Engineer); Korotkova, G. M. (Engineer)

ORG: none

TITLE: Automatic pulsed-arc welding of thin aluminum-alloy sheets with a nonconsumable electrode

SOURCE: Svarochnoye proizvodstvo, no. 12, 1965, 18-20

TOPIC TAGS: aluminum, aluminum alloy, ~~alloy~~ metal sheet, ~~thin sheet, sheet welding, alloy welding~~, arc welding, ~~pulsed arc welding, nonconsumable~~ electrode welding, TIG welding/AMg6 alloy

ABSTRACT: Aluminum-alloy sheets 0.2—1.0 mm thick can be successfully joined by pulsed-arc TIG welding in which two arcs are employed: a continuously maintained low-ampere pilot arc and a pulsed welding arc. Such a pulsed arc under optimum conditions produces better penetration with a considerably lower heat input, thus reducing warpage and the danger of burning through. The effectiveness of the pulsed arc is determined by the current and duration of pulse, the ratio of pause duration to pulse duration (G), and the pitch of the weld spots. Experiments conducted with AMg6 alloy sheets showed that for each thickness within 0.2—1.0 mm there is an optimal range of parameters. The minimum warpage in sheets 0.5 and 0.7—1.0 mm thick is achieved at a G of 1.5—3.0 and 1.0—2.0, respectively. The optimum duration

Card 1/2 UDC: 621.791.753.93-52:669.715-415

L 11211-66

ACC NR: AP6000617

of the total cycle (pulse + pause) for sheets 0.5 mm and 0.7—1.0 mm thick was 0.16—0.32 sec and 0.28—0.42 sec, respectively. Shorter cycle durations result in weld contamination and increased warpage. The data obtained in these experiments were used in designing power sources for pulsed-arc welding and were compiled into five nomograms from which total cycle, pulse and pause duration, arc current, and spot pitch can be selected. Orig. art. has: 6 figures. [DV]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 4174

Card 2/2

ACC NR: AT7002117 (N) SOURCE CODE: UR/0000/66/000/000/0323/0329

AUTHOR: Bugakov, I. I.; Shikhobalov, S. P.; Smirnov, V. P.; Smirnova, S. V.

ORG: none

TITLE: Stress-concentration in turbine discs with apertures and in T-head blade mounts in the discs

SOURCE: Vsesoyuznaya konferentsiya po polyarizatsionno-opticheskomu metodu issledovaniya napryazheniy. 5th, Leningrad, 1964. Polyarizatsionno-opticheskiy metod issledovaniya napryazheniy (Polarizing-optical method of investigating stresses); trudy konferentsii. Leningrad, Izd-vo Leningr. univ., 1966, 323-329

TOPIC TAGS: turbine, turbine blade, contact stress, stress analysis, turbine disc, creep mechanism

ABSTRACT: The authors describe the results of a systematic investigation, using plastic models, of creep in the critical parts of steam and gas turbines. Problems of elasticity, which approximately describe the condition of parts at the moment of turbine start up, can be solved either theoretically or experimentally using the technique of "freezing" flat models made of polyester resin. The problems of creep are investigated utilizing photographic methods on models prepared from transparent celluloid. These models were subjected to a constant external load. The measurements of

Card 1/2

ACC NR: AT7002117

the optical variables commenced immediately after the loading and were carried out in certain intervals right up to the onset of the steady creep. The stress concentration coefficient is derived from the rheological expression for material creep. For discs with small apertures the stress concentration factor was determined from the experimental data. The dependence of the stress concentration factor from the load was also determined experimentally and plotted for T-head mounts of the turbine blades, both for a perfect fit and the presence of a gap. The investigations showed that the greatest tensile stress occurs in the tail end of the blade and in the rim of the disc. Orig. art. has: 8 figures.

SUB CODE: ~~19,11~~ 10/ SUBM DATE: 14Jun66/ ORIG REF: 005/ OTH REF: 001

Card 2/2

S/181/63/005/004/010/047
B102/B186

AUTHORS: Shamfarov, Ya. L., and Smirnova, T. A.

TITLE: Investigation of spin-lattice relaxation in neutron-irradiated quartz

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1046 - 1049

TEXT: Two samples of natural monocrystalline quartz (disc, 9 mm diam, 2 mm height; parallelepiped, 3·4·1.4 mm^3) were exposed to neutron irradiation ($3\cdot10^{18}$ and $3\cdot10^{19}$ n/cm^2) and then subjeted to e.p.r. analysis. The first specimen showed intense lines with isotropic g-factor ($g\simeq2$) plus weak lines with anisotropic g-factor; the second had only one intense e.p.r. line with isotropic g-factor ($g\simeq2$). The spin concentrations of these crystals were respectively 10^{18} and 10^{19} cm^{-3}. The spin-lattice relaxation time T_1 was measured with the method of pulse inversion(Phys. Rev. 119, 953, 1960) at the frequency 9000 Mc/sec, and their time and temperature dependence was investigated in the range 1.7 - 4.2°K. The experimentally obtained relaxation curve can be described by $\exp(-t/T_1) = 1 - \Delta V(t)/\Delta V(\infty)$ where

Card 1/2

$\Delta V(t)$ is the variable epr. signal amplitude, $\Delta V(\infty)$ the equilibrium value. This relation corrcsponds to the relaxation formula for a two-level spin system: $\exp(-t/T_1) = 1 - n(t)/n(\infty)$, where $n = N_1 - N_2$ is the population excess of the lower level and $n(\infty)$ is the equilibrium value, reached when the signal amplitude passes through zero. For the first specimen (with the paramagnetic defect concentration 10^{18} cm^{-3}) $T_1 \sim T^{-1}$ in the range $1.7^\circ K < T < 3^\circ K$ and $T_1 \sim T^{-4}$ in the range $3^\circ K < T < 4.2^\circ K$. For the second specimen (10^{19} defects/cm^{-3}) $T_1 \sim T^{-1}$ only between 1.7 and $2^\circ K$ and for $2^\circ K < T < 4.2^\circ K$, $T_1 \sim T^{-4}$. It may therefore be concluded that T_1 depends strongly on the paramagnetic defect concentration at $4.2^\circ K$ and weakly at $1.7^\circ K$. If this concentration is higher a still stronger dependence could be possible. There are 3 figures.

ASSOCIATION: Institut radiofiziki i elektroniki AN USSR Khar'kov (Institute of Radiophysics and Electronics AS UkrSSR, Khar'kov)

SUBMITTED: October 19, 1962

L 19442-63 BDS/EEC(b)-2 AFFTC/ASD

ACCESSION NR: AP3006459 S/0109/63/008/009/1567/1572

AUTHOR: Shamfarov, Ya. L.; Smirnova, T. A.

TITLE: Experimental study of a two-level 9000-Mc paramagnetic amplifier

SOURCE: Radiotekhnika i elektronika, v. 8, no. 9, 1963, 1567-1572

TOPIC TAGS: two-level paramagnetic amplifier, quartz single crystal, paramagnetic defect fast neutron irradiation, paramagnetic amplifier oscillating condition, paramagnetic amplifier amplifying condition

ABSTRACT: This paper describes the equipment and the results of an experimental investigation of a two-level paramagnetic amplifier operating at 9 kMc. A quartz single crystal with paramagnetic defects caused by fast neutron irradiation (the dose was 3×10^{19} neutron·cm^{-2}) was utilized as the basic active material in the amplifier. The experimental setup consisted of 1) a reflex-type resonator with the active material placed in a helium cryostat,

1/3

2) a ferrite circulator, 3) a klystron pulse oscillator, and 4) a magnetic-field pulse modulator. In addition, a superheterodyne receiver, a single-sweep oscilloscope, and a control signal generator were employed. The klystron oscillator, operating at 9 kMc, generated pulses 50—120 μ sec in duration with prf of 5—25 cps and power of 0.5 w which were fed through the ferrite circulator to the cavity resonator. The magnetic-field modulator providing sinusoidal current pulses for the modulating coils, which were placed over the resonator and operated at a temperature of 4.2K, was synchronized with the klystron and the oscilloscope. Application of the sinusoidal current pulses with duration of one period, made it possible to change the magnetic field in the modulating coils adiabatically from $H < H_0$ to $H > H_0$ (H_0, resonance value of the magnetic field) during the action of the hf pulses on the quartz specimen. Measurements were performed for both oscillating and amplifying states of the device. In the first case, output pulses with power of 2 mw and duration of 0.5 msec were obtained at a temperature of 4.2K. The oscillatory character of the pulses was noted, and the frequency of the oscillations was found to be

2/3

L 19442-63
ACCESSION NR: AP3006459

90 kc. In the second case, with a bandwidth of 1 Mc, the gain-bandwidth product obtained 250 μ sec after the inversion was 16 ± 2 Mc. The gain decreased to unity within 5.5 sec after the inversion. The signal-to-noise ratio of the control receiver without the amplifier described was two with an input signal power of 1×10^{-3} to 2×10^{-13} w; the same receiver with the amplifier had a signal-to-noise ratio of three at an input signal of 10^{-14} w. Orig. art. has: 5 fromulas and 5 figures.

ASSOCIATION: Institut radiofiziki i elektroniki AN USSR (Institute of Radio Physics and Electronics, Academy of Sciences, USSR)

SUBMITTED: 02Aug62 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: SD NO REF SOV: 003 OTHER: 008

Card 3/3

PANTSEVICH, I.F., prof.; SMIRNOVA, T.A., kand.med.nauk

Pathogenesis and treatment of powerless labor. Trudy KGMI no.10:495-498 '63. (MIRA 18:1)

1. Iz kafedry akusherstva i ginekologii (zav. kafedroy - prof. I.F.Pantsevich) Kalininskogo gosudarstvennogo meditsinskogo instituta.

STUPISHIN, A.V., prof.; BABANOV, Yu.V., ml. nauchn. sotr.; GUSEVA, A.A., ml. nauchn. sotr.; DUGLAV, V.A., dots.; ZAKHAROV, A.S., dots.; KOSTINA, N.M., assistent; LAVROV, D.D., dots.; LAPTEVA, N.N., assistent; ROMANOV, D.F., ml. nauchn. sotr.; SIROTKINA, M.M., aspirant; SMIRNOVA, T.A., ml. nauchn. sotr.; TORSHYEV, N.P., st. prepod.; TAYSIN, A.S., st. prepod.; TROFIMOV, A.M., assistent; KHARITONYCHEV, A.T., prepod.; STUPISHIN, A.V., red.; KHABIBULLOV, R.K., red.

[Establishing physicogeographical regions in the middle Volga Valley] Fiziko-geograficheskoe raionirovanie Srednego Povolz'ia. Kazan', Izd-vo Kazanskogo univ., 1964. 196 p. (MIRA 18:12)

SMIRNOVA, T. A.

PA 11/49T44

USSR/Geological Prospecting Jul 48
Iron Ores

"Ferrous Quartzites in the Proterozoic Strata of the Central Urals," G. A. Smirnov, T. A. Smirnova, Ural State Geol Adm, 2½ pp

"Dok Ak Nauk SSSR" Vol LXI, No 2

Ferrous quartzites, although among the most common of the poorer iron ores, are somewhat unusual in the Urals. Authors present results of investigations in 1941. Submitted 22 Apr 48.

11/49T44

SMIRNOVA, T. A.

USSR/Geology - Granite, Urals 21 Jun 53

"The Age of Granite Intrusives in the Urals," G. A. Smirnov and T. A. Smirnova, Mining-Geological Inst, Ural Affiliate, Acad Sci USSR

DAN SSSR, Vol 90, No 6, pp 1139-1141

State that some granite blocks of the Urals stratigraphically inconsistently occur in the middle Devonian and in the Vizeyskiy deposits; that is, they are deposits belonging to the age of the great transgression. Mention that a greater positive role in solving this important problem could be performed by

269T61

mass application of radiometric methods -- the introduction of which are urgently necessary -- for determining the age of mineral rocks. Presented by Acad D. S. Belyankin (deceased) 24 Apr 53.

SMIRNOVA, T. A.

PHASE I BOOK EXPLOITATION SOV/3789
SOV/2-M-93

Leningrad. Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova

Voprosy fiziki atmosfery (Problems in Physics of the Atmosphere) Leningrad, Gidrometeoizdat, 1959. 113 p. (Series: Its: Trudy, vyp. 93) 1,200 copies printed.

Sponsoring Agency: USSR. Sovet Ministrov. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): Ye.S. Seleznyeva, Candidate of Physics and Mathematics; Ed. (Inside book): M.M. Yasnogorodskaya; Tech. Ed.: A.N. Sergeyev.

PURPOSE: This publication is intended for specialists in meteorology, aerology, and meteorological instrumentation.

COVERAGE: This collection of twelve articles contains the results of studies done under the auspices of the Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova (Main Geophysical Observatory imeni A.I. Voyeykov). The first six articles give the results of aerological investigations of clouds, and the structure of anticyclones and local winds. The last six articles cover the methods of aerological investigation of atmospheric ozone, aerosols, condensation nuclei, and the chemical impurities in atmospheric precipitation. A description of new or improved instruments used in aerological investigations is also given. References are given at the end of some articles.

Mrukhkrurya, V.I. Universal Electrophotometer — 70
A description is given of an electrophotometer used for the study of light propagation in the earth's atmosphere, light reflected by the moon and planets, and other radiation in the visible light zone. Some problems relative to operating the electrophotometer are discussed. The author proposes a simple method for checking the linearity of the optical characteristic of the photometer, and a new method for measuring the degree and the angle of light polarization.

Aleksandrov, E.N., and O.P. Petrenchuk. Methods for Measuring the Condensation Nuclei in the Free Atmosphere by Aircraft Soundings — 81
The article describes the methods for measuring the condensation nuclei in the free atmosphere during the IGY.

Kaydal', A.N., and Yu.I. Turkin. Analysis of Atmospheric Precipitation for Na, K, Ca, and Mg Content — 88

Korchigina, K.K., V.I. Mrukhkrurya, and T.A. Smirnova. Distribution of Brightness Over the Day and Night Sky — 95
The authors give data on observations made during the summer of 1958 in Voyeykovo with an electrophotometer with a FEU-19 photomultiplier. A brief analysis of results is given.

Gushchin, G.P. Basic Tables for Calculating the General Atmospheric Ozone Content by Optical Observations — 104
The article contains the tables used by the ozonometric stations in the USSR.

AVAILABLE: Library of Congress

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9

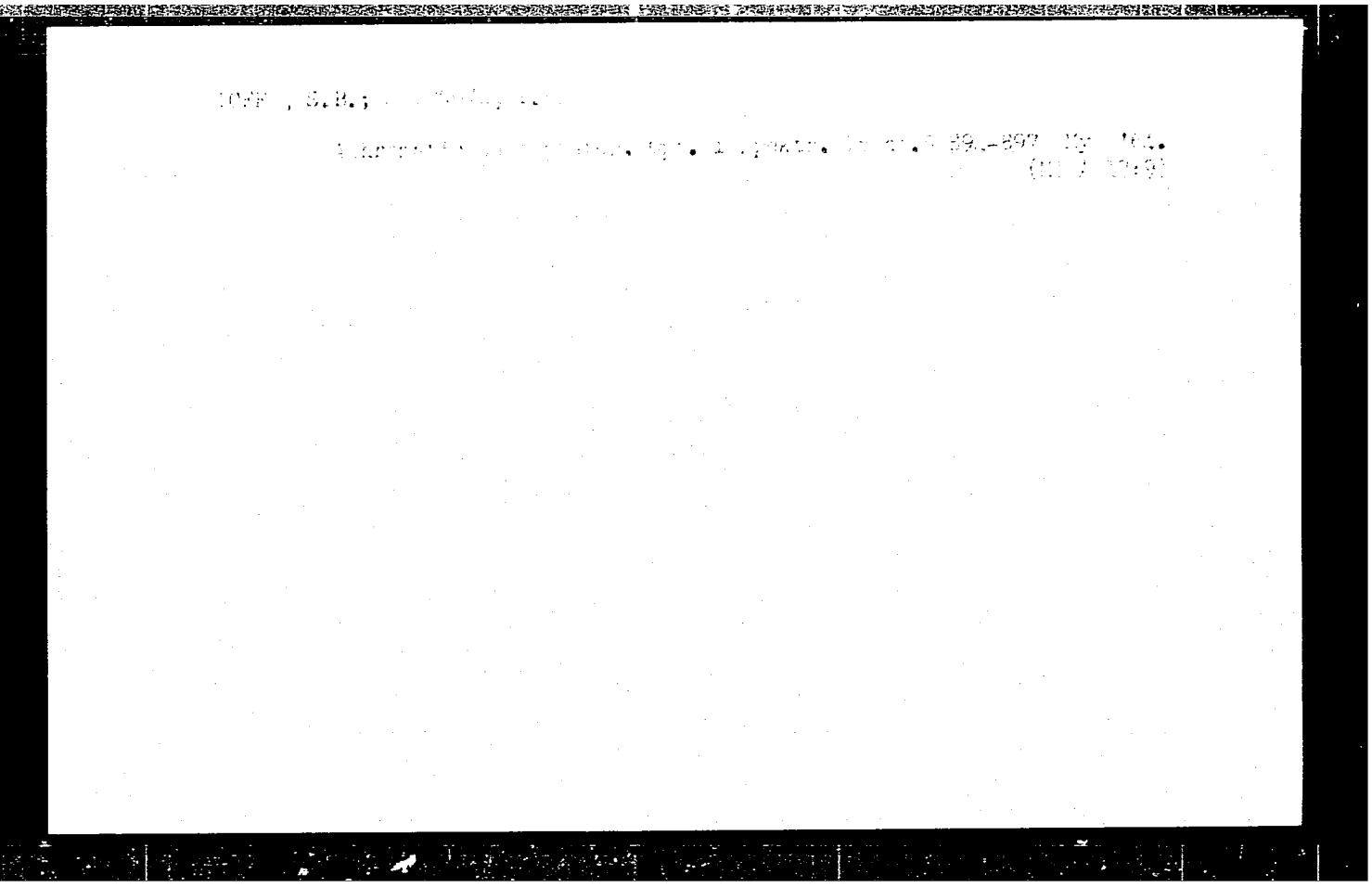
SMIRNOV, G.A.; SMIRNOVA, T.A.

Basic paleogeographic features of the Urals during the Famennian stage. Dokl. AN SSSR 135 no.4:937-939 '60. (MIRA 13:11)

1. Gorno-geologicheskiy institut Ural'skogo filiala Akademii nauk SSSR. Predstavleno akademikom D.V.Nalivkinym.
(Ural mountain region--Paleogeography)

SMIRNOV, G.A.; SMIRNOVA, T.A.; KHABAKOV, A.V., otv.red.; TAMKOVA, N.F., tekhn.red.

[Materials on the paleogeography of the Urals] Materialy k paleogeografii Urala. Ocherk 3. Famenskii vek. Sverdlovsk, 1961. 89 p. (Akademiia nauk SSSR. Ural'skii filial, Sverdlovsk. Gorno-geologicheskii institut. Trudy, no.60). (MIRA 16:2)
(Ural Mountains—Paleogeography)



PASHKOV, Ye.P.; KUSHNAREV, V.M.; SMIRNOVA, T.A.

Electron microscopic study on the effect of antibiotics on Staphylococcus aureus. Antibiotiki 10 no.6:538-543 Je '65. (MIRA 18:7)

1. Kafedra mikrobiologii I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova i Laboratoriya fizicheskikh metodov issledovaniy Moskovskogo instituta vaktsin i syvorotok im. I.I.Mechnikova.

MYASOYEDOV, Ye.S., dotsent; BROVKINA, M.A., assistent; SMIRNOVA, T.D., klinicheskiy ordinator; MIRONOVA, N.S., klinicheskiy ordinator

An analysis of errors in diagnosing rheumocarditis outside of the hospital. Sov.med. 20 no.12:6-8 D '56. (MLRA 10:1)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - dotsent Ye.S. Myasoyedov) Ivanovskogo meditsinskogo instituta (dir. dotsent Ya.M. Romanov)

(RHEUMATIC HEART DISEASE, diag. errors)

S/126/61/012/005/012/028
E193/E383

AUTHORS: Pokrovskiy, N.L. and Smirnova, T.G.

TITLE: The effect of sodium and zinc additions on the structure and microhardness of tin

PERIODICAL: Fizika metallov i metallovedeniye v. 12, no. 5, 1961, 708 - 713

TEXT: One of the methods of refining the structure of metals consists of adding a small quantity of a suitable, so-called, modifying alloying constituent. In studies of the modifying effect of various additions, it is important to use high-purity metals, to ensure chemical and thermal stability of the moulds and to prepare the experimental alloys by vacuum-melting. All these conditions are easier to meet for low-melting point metals and it was for this reason that tin was selected as being particularly suitable for the purpose of the present investigation, whose object was to study the effect of a surface-active (Na) and a surface-inactive (Zn) metal on the structure and microhardness of zone-refined high-purity (99.9992%) tin. The experimental specimens, containing

Card 1/5

S/126/61/012/005/012/028
E193/E383

The effect of ...

0.010 - 0.516 at.% Na or 0.004 - 0.210 at.% Zn were prepared in glass ampules in a vacuum of 10^{-5} mm Hg. The ampule was placed in a sand-filled thermostat after the alloy had become molten, and allowed to cool to room temperature in 10 - 12 hours. Two methods were used in the preparation of metallographic specimens. In one the surface of cast metal was filed with a barette file and polished with a velvet cloth covered with a special paste recommended in Ref. 5 (Metall, 1952, 17/18, 528). In the second method a liquid alloy was poured in vacuum through a capillary into a cylindrical glass mould, at the bottom of which a flat polished optical glass disc had been placed. After solidification the flat end of the cylindrical ingot in contact with the polished glass disc had a mirror surface which did not require further polishing. The structure was revealed by etching in concentrated HCl in which a few grains of potassium chlorate had been dissolved. The results can be summarized as follows:

1) Sodium inhibits excessive grain growth of Sn during the

Card 2/3

The effect of ...

solidification and acts as a grain-refining addition. The effect of Zn is much less pronounced.

2) The effect of the additions studied on the degree of dispersion of the structure of the surface layer, plastically deformed and recrystallized during mechanical polishing, is different. In this case Zn is the more active addition, which can be attributed to the fact that Zn, being soluble in Sn, raises its recrystallization temperature. It is also for the same reason that the hardness of Sn, unaffected by Na additions, increases with increasing Zn content. This is shown by data reproduced in a table, where the microhardness values of various alloys, tested under a load of 30 g, are given the microhardness of pure Sn being $H = 6.2$ kg/cm^2.

3) The grain growth in the surface layer, plastically deformed during polishing and subsequently annealed for 3 hours at 150 °C was markedly inhibited by Na but only slightly so by Zn additions.

Card 3/3

The effect of ....

4) The effects observed depended, in the first instance, on the solubility of the alloying additions in solid Sn. Both the published data and the results of the present investigation indicate that Zn is soluble and Na practically insoluble in Sn.

There are 3 figures, 1 table and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The English-language references mentioned are: Ref. 2: P. Gay, A. Kelly - Acta Crystall. 1953 6 no. 2 172. Ref. 7: M. Hansen, K. Anderko - Constitution of Binary Alloys, McGraw-Hill Book Co.Inc., New York-Toronto-London 1958.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University im. M.V. Lomonosov)

SUBMITTED: March 13, 1961

Card 4/5

KOZLOVA, G.V., inzh.; SMIRNOVA, T.G., inzh.; MOLCHANOVA, V.P., kand.tekhn. nauk; TUBYSHKINA, Z.A., kand.tekhn.nauk

Electroplated coatings for the protection of molybdenum from high temperature oxidation. Metalloved. i term. obr. met. no.7:7-9 Jl '62. (MIRA 15:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Molybdenum--Corrosion)
(Chromium plating)

GULYAYEV, A.P., doktor tekhn.nauk, prof.; KOZLOVA, G.V., inzh.; MOLCHANOVA, V.P., kand.tekhn.nauk; SMIRNOVA, T.G., inzh.

Properties of electroplated coatings on molybdenum. Metalloved. i term. obr. met. no.7:10-13 Jl '62. (MIRA 15:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Molybdenum)
(Electroplating)

POKROVSKIY, N.L.; SMIRNOVA, T.G.

Simultaneous action of zinc and sodium impurities on the microhardness and structure of a recrystallized surface layer of tin. Fiz.met.i metalloved. 14 no.6:890-894 D '62. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Tin alloys--Metallography) (Hardness)

KOZLOVA, G.V.; SMIRNOVA, T.G.

Electrolytic protection of niobium from oxidation (from foreign journals). TSvet. met. 35 no.5:88-89 My '62. (MIRA 16:5)
(Niobium--Electrometallurgy) (Oxidation)

L 32243-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AR5004770 S/0137/64/000/010/G033/G034

SOURCE: Ref. zh. Metallurgiya, Abs. 10G232

AUTHOR: Kudryavtsev, N. T.; Smirnova, T. G. 19 B

TITLE: Electrolytic deposition of iron-chromium alloys

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleyeva, vyp. 44, 1963, 102-107

TOPIC TAGS: iron base alloy, chromium containing alloy, electrolyte, metal electrolytic deposition

TRANSLATION: On the basis of tests carried out, the following conditions are recommended for the electrodeposition of iron-chromium alloys containing 27-35% chromium: composition of the electrolyte - $Cr_2(SO_4)_3 \cdot 6H_2O$ 160 g/l (2 N.), $FeSO_4 \cdot 7H_2O$ 30-50 g/l (0.2-0.3 N.), NH_2CH_2COOH 150 g/l (2 N.). Temperature 20°, D=7-12 a/dm^2, pH 2.3 - 2.4. Yield of alloy based on current 20-26%. Microhardness of the alloy containing 32% chromium is 600 kg/mm^2. The deposits of alloy are even, light, and shining. 11 literature titles. G. Svodtseva.

Card 1/1 SUB CODE: MM ENCL: 00

KUDRYAVTSEV, N.T., SMIRNOVA, T.G.

Electrodeposition of iron from sulfate electrolytes in the presence of aminoacetic acid (glycine). Izv.vys.ucheb.zav.; khim. i khim. tekh. 6 no.6:997-1001 '63. (MIRA 17:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra tekhnologii elektrokhimicheskikh proizvodstv.

KUDRYAVTSEV, N.T., doktor khimicheskikh nauk; SMIRNOVA, T.S., kand. tekhn. nauk.

Electrolytic deposition of iron chromium alloys. Mashinostroenie no.5:60-61 S-O '64 (MIRA 18:2)

KUDRYAVTSEV, N.T., SMIRNOVA, T.G.

Electrodeposition of iron from sulfate electrolytes in the presence of aminoacetic acid-glycocoll. Trudy MKHTI no.44:86-90 '64.
(MIR: 18:1)

Electrolytic deposition of iron-chromium alloys. Ibid.:102-107

L 63776-65 EWT(m)/EPF(c)/EWP(i)/EWA(d)/EWP(t)/EWP(b) JD/WB

ACCESSION NR: AP5017740 UR/0365/65/001/004/0353/0358

621.357.7

43

B

AUTHOR: Kudryavtsev, N. T., Smirnova, T. G.

55,44

TITLE: Electrolytic coatings made of Fe-Cr alloy

55,44

SOURCE: Zashchita metallov, v. 1, no. 4, 1965, 353-358

TOPIC TAGS: iron containing alloy, chromium containing alloy, electrolytic coating, corrosion resistance, oxidation resistance, galvanic coating, cathode residue, glycine, buffer property, electrolyte solution, complex cation

ABSTRACT: Metallurgically obtained Fe-Cr alloys containing 10 to 30% Cr are known under the name of stainless chrome steels. They are highly resistant to oxidation and corrosion and are therefore widely used in industry. Thus, it may be assumed that similar alloys obtained by the galvanic method would also be highly corrosion-resistant and find practical application. Until recently experiments to verify this assumption had been unsuccessful, the cathode residue thus obtained being of poor quality. The impasse was broken, however, by Ya. B. Pshilusski (Dissertation, Mendeleyev Institute of Chemical Technology, Moscow,

55,44

55,44

Card 1/3

L 63776-65
ACCESSION NR: AP5017740

1961), who had first shown that the addition of aminoacetic acid (glycine) to the solution of chromium salt greatly improves the quality of the deposit by enhancing the buffer properties of the electrolyte and leading to the formation of complex ions of chromium with glycine. In acid solutions chromium reacts with glycine to form complex cations of the $[Cr(GIH)_n]^{3+}$ type, where n = 3, 4, 5, 6, etc., depending on the ratio between components. In this connection, the authors investigated the buffer properties of solutions of the sulfate salts of chromium and iron in the presence of glycine, by the method of potentiometric titration. The experiments revealed that the following conditions may be recommended for precipitating Fe-Cr alloy. Composition of electrolyte (g/liter): $Cr_2(SO_4)_3 \cdot 5H_2O$ — 160, $FeSO_4 \cdot 7H_2O$ — 30-50, NH_2CH_2COOH — 150, $H_2C_2O_4$ — 0.5;]H 2.3; temperature 20°C; cathode current density 7-12 a/decimeter. The amount of glycine added corresponds to the formation of the complex ion $[Cr(GIH)_3]^{3+}$; oxalic acid is added to the electrolyte to prevent the hydrolysis of the trivalent salts of iron that form during the oxidation of the divalent Fe irons by the oxygen of the air. The specified electrolyte yields bright, level, thin (2-3mm) shining coatings of Fe-Cr alloy containing 27 to 35% Cr. The microhardness of this alloy ranges from 550 to 600 kg/mm^2. Corrosion tests in the mist of 3% solution of common salt at 30°C showed that Fe-Cr coatings are more corrosion-

Card 2/3

L 63776-65

ACCESSION NR: AP5017740

resistant than pure electrolytic iron. Orig. art. has: 5 figures.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology)

SUBMITTED: 11Feb65 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 003 OTHER: 002

Card 3/3

L 53691-65 EWT(l)/EWT(m)/EPA(s)-2/T/EWP(t)/EEC(b)-2/EWP(b)/EWA(c)
Pt-7/Pi-4 IJP(c) JD/JG/GG

ACCESSION NR: AP5008786 S/0126/65/019/003/0401/0405

66.065.53

AUTHOR: Pokrovskiy, N. L.; Smirnova, T. G.

TITLE: Effect of soluble and insoluble impurities on the recrystallization of zone refined tin

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 3, 1965, 401-405

TOPIC TAGS: zone refining, recrystallization, impurity content

ABSTRACT: The recrystallization of zone refined tin and of tin containing bismuth (0.005-0.1 at. %), sodium (0.006-0.05 at. %), and indium (0.05-0.1 at. %) impurities was studied. A specially developed instrument is described with which it was possible to continually observe the sequential stages of crystallization. It was found that all the impurities increased the recrystallization temperature of tin, with the greatest effect being shown by bismuth, followed by sodium and indium. The effect of each impurity is explained as being the individual degree of surface activity and solubility or insolubility of each element in solid tin. "In conclusion we express deep gratitude to Ye. V. Kolontsova and V. K. Semenchenko for par-

Card 1/2

L 53691-65

ACCESSION NR: AP5008786

3

ticipation in discussing the results of the work and for their valuable comments and advice, to V. V. Chirkova for help in setting up the experiments and to V. A. Sivokho for participation in adjusting the instrument. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: Moskovskiy gosuniversitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 04Mar64 ENCL: 00 SUB CODE: MM

NO REF SOV: 011 OTHER: 004

Card 2/2

ACC NR: AR7000869 SOURCE CODE: UR/0058/66/000/009/E048/E048

AUTHOR: Pokrovskiy, N. L.; Smirnova, T. G.

TITLE: Influence of surface-active and inactive impurities on the grain growth of tin in the process of collective recrystallization

SOURCE: Ref. zh. Fizika, Abs. 9E385

REF SOURCE: Sb. Poverkhnostn. yavleniya v rasplavakh i voznikayushchikh iz nikh tverd. fazakh. Nal'chik, 1965, 443-448

TOPIC TAGS: surface tension, recrystallization, ~~surface active agent~~, tin, ~~impurity~~ zinc ~~impurity~~, sodium ~~impurity~~, bismuth ~~impurity~~, thallium ~~impurity~~, silver ~~impurity~~, antimony ~~impurity~~, ~~impurity concentration~~, GRAIN GROWTH, CRYSTAL IMPURITY, METAL SURFACE

ABSTRACT: The kinetics of the grain growth of Sn in the presence of small concentrations (0.001—0.5 at %) of surface-active (Na, Bi, Sb, Tl), surface neutral (In, Ag), and surface-active (Zn) impurities are studied. A certain parallelism has been found in the influence of these impurities on the surface tension of molten Sn, at the interface with the vacuum, and on the rate of grain

Card 1/2

ACC NR: AR7000869

growth V. For Bi, Tl, Sb, and In, the following linear dependence holds well: $\lg V = f(\lg[c(r-r_0)])$, where c—impurities in at.% concentration; and r and r_0—the atomic radii of P and Sn impurities. Noticeable deviations from linearity are observed for other impurities, and may be explained in some cases by the very small solubility of the impurities (Na, Ag), and in other cases by the non-activity of the impurities (Zn). It is determined that all impurities studied greatly increase the activation energy of the grain growth of Sn. B. Summ. [GC]
[Translation of abstract]

SUB CODE: 11/

Card 2/2

105-6-13/26

AUTHOR SMIRNOVA, T.I., Ing.

TITLE A New 22o KV, 7ooo MVA Air-Blast Circuit Breaker.
(Novvyy vozdushnyy vyklyuchatel' na 220 Kv, 7ooo MVA - Russian)

PERIODICAL Elektrichestvo, 1957, : Nr 6, pp 48 - 5o (U.S.S.R.)

ABSTRACT At the Allunion Institute for Electric Engineering "Lenin" a new experimental construction of a 7ooo MVA Air - blast circuit breaker with a nominal voltage of 2oo kV was developed. First the construction, and later the basic technical data as well as test results obtained with this device are given here. Mechanic testing consisted in connecting and breaking contact looo times under 2o at superpressure as well as in doing the same 25 times at 21, and 25 times at 15 st superpressure. Conditions after testing were found to be satisfactory. In connection with tests carried out by breaking contact voltage distribution was found to be uniform. Also individual cells were tested. Tests were carried out with 5o% of the nominal circuit breaking capacity and also with loo%.
(4 illustrations)

ASSOCIATION Allunion Institute of Electric Engineering "Lenin"

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Card 1/1

S/724/61/000/000/015/020

AUTHOR: Smirnova, T.I.

TITLE: The effect of an addition of Tin on the properties of the alloy AL9 (AL9) during heat treatment.

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander and M. B. Al'tman. Moscow, Oborongiz, 1961, 118-124.

TEXT: The paper describes an experimental investigation of the possible effect of the presence of Sn in amounts greater than 0.01% on losses in mechanical properties and corrosion resistance and, hence, in the excessive incidence of rejects of AL9 Al alloy. The investigation was made on specimens with additions of Sn of 0.01, 0.05, 0.1, and 0.5% on the mechanical properties, the microstructure, and the surface quality of the specimens. The composition of the saltpeter baths in which the heat treatments of the specimens were performed is tabulated. The critical parameter observed in these tests was the content of NaCl which, during heating, dissociates into Cl and Na ions and which, through the free Cl ions, produces the corrosion of the Al alloys. The effects of the various above-stated additions of Sn on the mechanical properties of the AL9 alloy are summarized in a full-

Card 1/2

page table. These additions impair the tensile strength of both the freshly-cast and the heat-treated alloy, but increase its plasticity somewhat. Up to 0.05% of Sn does not affect the structure of the alloy appreciably. It is assumed that the Sn is contained in the solid solution (SS). An increase in the Sn content up to 0.5% evokes the formation of a readily fusible eutectic which is laid out along the grain boundaries of the Al-Si eutectic, thereby impairing the mechanical properties of the alloy. An increase of the Cl ions in the saltpeter bath, from 0.2 to 2.7%, reduces the strength of the specimens during heat treatment by 3-4 kg/mm^2 by corrosion. The Cl-ion content in the saltpeter baths must not exceed 0.3-0.5%. There are 2 figures, 2 tables, and 4 references (2 Russian-language Soviet and 2 English-language sources, of which 1 is in Russian-language translation).

MARKOV, K.K., red.; POPOV, A.I., red.; SMIRNOVA, T.I., red.; GEORGIYEVA, G.I., tekhn. red.

[Periglacial phenomena in the U.S.S.R.] Perigliatsial'nye iavleniia na territorii SSSR; sbornik statei. Moskva, Izd-vo Mosk. univ., 1960. 287 p. (MIRA 14:7)

(Glaciology)

2

S/724/61/000/000/018/020

AUTHORS: Al'tman, M.B., Baykova, L.T., Krysin, B.T., Korol'kova, L.M., Smirnova, T.I., Kitari, G.G., Shitov, M.I., Sharuda, V.F., Tyukin, I.T., Syromyatnikova, M.A.

TITLE: Vacuum refining of Aluminum alloys.

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I.N. Fridlyander and M.B. Al'tman. Moscow, Oborongiz, 1961, 150-156.

TEXT: The paper describes the development of a method for the vacuum refining of Al alloys with the use of a flux, and the construction and development of a vacuum equipment for the refining of Al alloys capable of refining a melt of up to 300 kg. The refining method developed was intended to remove the various gaseous and solid nonmetallic impurities which enter into an Al alloy in the course of its smelting and to avoid, also, the difficulties encountered with method used heretofore, which consisted in the toxicity of the Cl and the chlorous and fluorous salts used to date. The basic concepts of the new method are the following: The impurities encountered in Al melts consist of H and oxides, primarily Al oxides. The H carries a positive charge (H^{1+}), whereas the Al oxides are charged negatively (O^{2-}).

Card 1/2

Hence, the H is readily adsorbed on the particles of Al oxide. If the H can be induced by the application of a vacuum to migrate to the surface of the melt, it is postulated that the solid nonmetallic impurities should be entrained thereby and become susceptible to capture by adsorption by a suitable flux placed on the surface of the melt. The rate of progress of such a process should be controllable simply by altering the power applied to the vacuum pump. The investigation was made on AA4 (AL4) and AA9 (AL9) Al alloys. The relationship between the weight of a melt and the vacuuming time was explored experimentally. While the test results indicated that the Mg content remained constant regardless of the vacuuming time, the porosity of the alloy was appreciably reduced in vacuuming tests lasting from 2 to 6 minutes. The addition of a suitable flux, as defined above, improved the degassing, with a subsequent further reduction in porosity and improvement in the mechanical properties of the alloy by 10-15%; this improvement eliminates the need for crystallization of cast parts in an autoclave in many instances. Typical vacuum-refining times at 780-790°C, in the presence of 0.2% of a suitable flux, are: For a metal weight of 50-100 kg, 3 min; 100-150 kg, 5 min; 150-250 kg, 7-9 min. The improvements obtained by the vacuum-refining procedure with the adsorbing flux are illustrated by tables of mechanical properties and photographs of the macrostructure of complex cast parts. There are 6 figures and 5 tables; no references. The participation of A. P. Shulepin, I. S. Kuznetsov, D. S. Chervyakov, and A. I. Komendat in the investigation is acknowledged.

STROMSKAYA, N.P.; SMIRNOVA, T.I.; KLIMOVA, V.A.; LOKTIONOVA, L.I.; SYROMYATNIKOVA, M.A.; AL'TMAN, M.B., rukovoditel' raboty.

Effect of metal inclusions on the properties of aluminum foundry alloys. Alium. splavy no.1:55-72 '63. (MIRA 16:11)

LISITSYN, V.N.; SMIRNOVA, T.I.

Transformation of halogen-containing aromatic compounds in the presence of hexamethylenimine. Part 2: Substitution of chlorine atom in nitrochlorobenzoic acids. Zhur. ob.khim. 33 no.7:2311-2313 Jl '63. (MIRA 16:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.
(Benzoic acid) (Chlorine compounds) (Hexamethylenimine)

SMIRNOVA, T. I.

USSR/Medicine - Diphteria, Bacilli Cultures

1 Mar 50

"Variation in the Chemical Composition of Diphtheria Bacteria in Relation to the Age of the Culture," A. N. Belozerskiy, V. B. Korchagin, T. I. Smirnova, Sci Res Inst of Pot, Moscow State U imeni M. V. Lomososov

"Dok Ak Nauk SSSR" Vol LXXI, No 1, pp 89-92

Conducts analysis of diptheria bacteria after 1, 2, 6, and 10 days' cultivation and tabulates amount of various constituents present at each time. Primary interest is in nature of volutin, which is present in large amounts in young culture but is reduced and finally disappears with age. Concludes it is a pentosopolynucleotide of yeast type. Submitted 12 Dec 49 by Acad A. I. Oparin.

PA 165T40

SMIRNOVA, T. I.

166T2

USSR/Biology - Seeds, Sprouting 21 Jul 50
Chemistry - Gutta-Percha

"Study of the Sprouting of the Seeds of the Warty Spindle Tree (Bereskiet Boradavchatyy)," V. L. Ketovich, T. I. Smirnova, A. A. Bundel', S. S. Pechnikova, Inst of Biochem imeni A. N. Bakh, Timber Inst, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIII, No 3, pp 527-530

Studies reasons for slow sprouting of this gutta-percha-producing tree. Investigates biochemical changes occurring when seeds undergo stratification, which consists of placing seeds in moist

166T2

USSR/Biology - Seeds, Sprouting 21 Jul 50
(Cont'd)

turf under conditions of low temperature and good aeration. Finds subject process produces faster sprouting. Finds removal of small amount of capsule and endosperm at root end of seed provides better supply of moisture and oxygen to the embryo and produces faster sprouting. Includes five tables and two photographs. Submitted 16 May 50 by Acad A. I. Oparin.

166T2

SMIRNOVA, T. I.

USSR

The effect of drying on the grain and the technological properties of freshly harvested wheat grain. V. L. Kretovich, A. A. Bundel, T. I. Smirnova, Z. N. Galachalova, Z. A. Plyusnina, S. D. Pl[redacted]skitash, A. P. Gerzhol, G. A. Dzhorogyan, L. Ya. Auerman, R. R. Tokareva, F. N. Korovin, V. M. Bazarnova, E. A. Alyakritskaya, A. G. Kul'man, and N. A. Ivannikova. *Biokhim. Zerna, Akad. Nauk S.S.S.R., Sbornik* 2, 45–111 (1954).—A detailed account is given of the investigation of alterations produced in wheat grain during air drying. Grain with moisture content up to 25% can be satisfactorily dried even at 45° (av. temp. of the grain, with the app. reaching 70°); this temp. regime not only does not spoil the seed quality but actually improves the germination and rate of growth after subsequent planting. Grain destined for bakeries and similar establishments can be dried (with moisture up to 22%) even at 120° app. temp. without spoiling the breadmaking qualities. A 2-step drying procedure tends to reduce the gluten content in the flour made from the dried grain, along with a slight decline of EtOH-sol. N. The activity of proteases in the flour rises slightly if the drying app. is kept at 110°, but a decline in the enzyme activity takes place with drying at 130°; catalase behaves similarly. G. M. Kosolapoff

SMIRNOVA, T. I.

✓ Study of the protein reserve of the soya by the ultracentrifuge method. V. L. Kretovich, T. I. Smirnova, and S. Ya. Frenkel (A. N. Bakh Inst. Biochem., Moscow). *Biokhimiya* 21, 842-7(1956).—The albumin and globulin preps. of soya cotyledons were lyophilized and then studied analytically with the aid of the ultracentrifuge. The albumin fraction consisted of a homogenous protein and a comparatively low mol. polydispersed admixt. The sedimentation const. of this component S_4 was 1.98 ±0.003 *S*. The mol. wt. of the basic component was 16,000; and of the low mol. admixt. 5,000. The globulin fraction consisted of 2 sedimentation components having sedimentation coeffs. 14.0 and 8.0 *S*. The mol. wt. of the components was 330,000 and 126,000, resp. In the presence of cysteine the component S_1 had a longitudinal diameter for which $S = 10.7$ and its mol. wt. was 245,000. The origin of the diameter was detd. by the formation of certain highly labile bonds; when NaCl was added to the proteins dissolved in water in the presence of cysteine the protein reverted to its original state.

B. S. Lavine.

KRETOVICH, V.L.; SMIRNOVA, T.I.

Oxidation and reduction as factors influencing the enzymatic activity of vegetable proteins [with summary in English]. Biokhimiia 22 no.1/2: 102-110 Ja-F '57. (MLRA 10:7)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PROTEINS,
eff. of exidation-reduction on fermentative activity of vegetable proteins (Rus))
(OXIDATION-REDUCTION, effects,
fermentative activity of vegetable proteins (Rus))

20-114-3-41/60

AUTHORS: Deborin, G. A., Ivashchenko, G. F., Smirnova, T. I.

TITLE: Determination of the Molecular Weight of Some Albumins in a Monomolecular Layer (Opredeleniye molekulyarnogo vesa nekotorykh belkov monomolekulyarnom sloye)

PERIODICAL: Doklady Akademii Nauk SSSR,1957,Vol 114,Nr 3,pp. 602-605(USSR)

ABSTRACT: Recently theoretical foundation has been given to the determination of albumins in the above circumstances, and the molecular weights of more than ten different kinds of albumin were obtained. These results were almost always in agreement with the relevant results obtained by other methods. For several reasons, these investigations have so far been limited to different animal albumins, whereas of the vegetable albumins only the molecular weights of gliadin and zein have been determined (25,000 - 27,000 and 20,000, respectively). Thus it appeared to be of interest to find such conditions under which it would be possible to determine the molecular weights of such vegetable albumins as glycinin and edestin, as well as of the ferment albumin of ribonuclease. Surface pressure was measured by means of a vertical scale of the Wilhelmi type,

Card 1/3

Determination of the Molecular Weight of Some Albumins in a Monomolecular Layer

with a torsion wire of phosphor bronze (diameter 0.1 mm). Glycinin was obtained from the endosperm of soybean, edestin from hemp seeds. Ribonuclease was obtained from the pancreas of cattle. The determination of the molecular weights of the two former substances (concentrations 0,07 % and 0,05 %, respectively) was carried out with a 20 % solution of ammonium sulphate at a pH = 4.5. Tables Nr 1 and Nr 2, as contained in the paper under review, represent the characteristics and changes in the molecular weights of the albumins concerned. Figure Nr 1 shows the results of the analysis, figure Nr 2 the molecular weights of ribonuclease, and figure Nr 3 the curves of dependence Fa upon F for the same substance. It follows from the experimental results that, subject to an appropriate selection, it is possible successfully to apply the methods of monomolecular layers to the determination of the molecular weights of all three substances under consideration. There are 3 figures, 2 tables, and 11 references, 4 of which are Soviet .

SMIRNOVA, T. I.

KRETOVICH, V.L.; SMIRNOVA, T.I.; FRENKEL', S.Ya.

Fractionation of glycinin by ultracentrifugation [with summary in English]. Biokhimiia 23 no.1:135-139 Ja-F '58. (MIRA 11:3)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva i Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.
(PROTEINS, determination,
glycinin, ultracentrifugation (Rus)
(SOY BEAN,
same)

KRETOVICH, V.L.; SMIRNOVA, T.I.; FRENKEL', S.Ya.

Submolecular structure of glycinin and conditions of its reversible association [with summary in English]. Biokhimiia 23 no.4:547-557 Jl-Ag '58. (MIRA 12:3)

1. Institute of Biochemistry (Moscow) and Institute of Higher Molecular Compounds (Leningrad), Academy of Sciences of the U.S.S.R., Moscow.

(GLOBULIN,
glycinin, submolecular structure in reversible assoc. (Rus))

SMIRNOVA, T.I.; POGLAZOV, B.F.; KRETOVICH, V.L.

Amperometric titration of SH-groups in glycinin. Biokhimiia 24 no.4:758-760 Jl-Ag '59. (MIRA 12:11)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PROTEINS chem.)
(SULFHYDRYL COMPOUNDS chem.)

KRETOVICH, V.L.; SMIRNOVA, T.I.; KARYAKIN, A.V.

Mechanism of the reversible association of glycinin in solutions in connection with changes in pH. Vysokom.soed. 3 no.9:1389-1394 S '61. (MIRA 14:9)

1. Institut biokhimii imeni A.N. Bakha AN SSSR i Institut geokhimii i analiticheskoy khimii AN SSSR.
(Glycinin--Spectra) (Hydrogen-ion concentration)

KRETOVICH, V.L.; SMIRNOVA, T.I.; KARYAKIN, A.V.

Study of the absorption spectra of glycinin in connection with its asscciation-dissociation. Biokhimiia 26 no.5:800-806 S-O '61. (MIRA 14:12)

1. Institute of Biochemistry, and Institute of Geochemistry and Analytical Chemistry, Academy of Sciences of the U.S.S.R., Moscow. (GLYCININ)